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Ceres (1).

	Apparent.	Δ 2·7673.
	″	″
1897 Nov. 22	0·64	0·42
„ 23	0·55	0·36
Dec. 26	0·57	0·34
„ 27	0·55	0·33
1898 Jan. 2	0·51	0·31
		0·352

Vesta (4).

	Apparent.	Δ 2·7673.
	″	″
1899 Sept. 26	0·38	0·21
Oct. 7	0·32	0·17
„ 8	0·26	0·14
		0·175

The observations were difficult in each case.

These values when combined with the previous measures will not sensibly change them, and the first series should have the greatest weight. If we make this combination, weighting, by number of observations alone, we should have: Diameter of *Ceres*, 0″·383; diameter of *Vesta*, 0″·192, at distance 2·7673.

Yerkes Observatory, Williams Bay, Wisconsin:
1899 *October* 26.

Observations of the Leonids, 1899. By C. Michie Smith, Director of the Kodaikanal and Madras Observatories.

A careful watch for *Leonids* was carried out from the Kodaikanal Observatory on the morning of November 14 and on the three following nights. The approximate position of the Observatory is Lat. 10° 14′ N., Long. 5^{h} 10^{m} E.; height above sea level 7,700 feet. The following observations were made by the director and the first assistant, Mr. K. V. Sivarama Aiyar. Observations were also made by others of the assistants, but it has not been considered necessary to give these, as they do not cover any extra time. The time used is Madras mean time.

Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
	h m	h m		
Nov. 13	15 52	16 07	2	
	16 10	16 25	nil	
	16 25	17 10	3	1 equal to Venus.

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Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
	h m	h m		
Nov. 14	13 20	14 00	4	15 of these were of the first magnitude.
	14 00	15 00	4	
	15 00	16 00	4	
	16 00	16 30	6	
	16 30	17 05	7	

Watch ended at 17^h 15^m in advancing dawn.

Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
15	12 10	13 00	4	21 of the first magnitude.
	13 00	14 00	3	
	14 00	15 00	7	
	15 00	16 00	7	
	16 00	17 00	15	
	17 00	17 09	9	
16	12 00	14 00	1	
	14 00	15 00	Not observed	
	15 00	16 00	6	
	16 00	17 00	3	

The weather throughout was fine, with only very light passing clouds or occasional thin films of mist driving over the Observatory.

All records in this and the following lists were made within the area of Professor Pickering's map.

At Madras, Professor R. Ll. Jones, assisted by S. Solomon Pillai and S. Sitarama Aiyar, observed in nearly equally favourable weather, with the following results :—

Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
	h m	h m		
Nov. 13	10 00	15 00	nil	Fine and clear.
	15 00	16 00	3	
	16 00	17 00	5	
14	12 00	13 00	nil	Quite clear after 13^h 30^m.
	13 00	14 00	1	
	14 00	15 00	nil	
	15 00	16 00	10	Moon set 15^h 45^m.
	16 00	17 00	16	
	17 00	17 13	1	

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Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
	h m	h m		
Nov. 15	12 20	14 15	nil	Passing clouds.
	14 15	15 00	3	
	15 00	16 00	8	Moon set about $16^h\ 35^m$.
	16 00	17 00	12	
16	–	15 08	nil	
	15 08	16 00	3	
	16 00	17 00	1	
17	15 00	17 00	2	Cloudy till 15^h.

Of the other counts that have been forwarded to me, the most interesting is a series made by the Rev. Oswald O. Williams, B.Sc. (London), L.S.A., at the Mission House, Karimganj, Assam. This station is thirty-four miles due east of Sylhet, and the time used was local mean time, which is 49^m fast of Madras mean time. The following is a summary of the results :—

Date.	Count begins.	Count ends.	No. of Leonids seen.	Remarks.
	h m	h m		
Nov. 13	13 30	14 00	2	Clear sky.
	14 00	15 00	nil	
	15 00	16 00	12	
	16 00	16 30	8	
	16 30	16 45	4	Zodiacal light magnificent.
	16 45	17 00	4	
14	13 30	–	1	Sky perfectly clear.
	After Moon set.			
	16 00	16 15	11	
	16 15	16 35	Several seen but not counted.	
	16 35	16 45	12	
	16 45	17 00	24	2 of first magnitude.
	17 00	17 08	12	
	17 08	17 15	10	
		Dawn.		
	17 15	17 18	4	
	17 18	17 22	5	
	17 33	17 30	2	

15 Very foggy. No observations.

16 Went out thrice but saw no meteors, much moonlight.

Kodaikanal Observatory.

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Note on the Unpublished Observations made at the Radcliffe Observatory, Oxford, between the years 1774 *and* 1838 ; *with some Results for the year* 1774. By Arthur A. Rambaut, M.A., D.Sc., Radcliffe Observer.

The debt which Astronomy owes to the enlightened liberality of the University of Oxford and to the zeal of its two illustrious Professors, Hornsby and Robertson, who devoted a large proportion of their lives to the editing of the remarkable series of observations made by Bradley at the Royal Observatory, Greenwich, is well known to all lovers of Astronomy of precision.

At the Radcliffe Observatory were compiled, and at the University Press were printed, the two large tomes entitled *Astronomical Observations made at the Royal Observatory, Greenwich, from the year* 1750 *to the year* 1762—the first volume edited by Hornsby, in 1798, the second by his successor, Robertson, in 1805.

On this foundation was built up the superb structure of Bessel's *Fundamenta Astronomiæ*, and, at a much later date, the valuable system of star places which we owe to Auwers' *Neue Reduction der Bradley'schen Beobachtungen.*

In the opening paragraph of his preface to the *Fundamenta* Bessel pays a just tribute of admiration to the diligence and industry of these remarkable men, and all who have ever had occasion to make use of Bradley's observations will endorse Bessel's words. But while the names of Hornsby and Robertson must ever be associated with that of Bradley in this work, many astronomers are, I think, unaware that the admiration which these two eminent men felt for their illustrious predecessor—for Bradley, too, had been Professor of Astronomy at Oxford—was not confined to a minute and careful study of his work, but was exhibited in a still more practical form by carrying on and enormously extending his observations with the instruments which the liberality of the Trustees of Dr. Radcliffe's will had placed at their disposal.

When the Radcliffe Observatory was built (1771–1773), it was equipped with instruments by Bird similar, but in some important respects superior, to those which he had previously made for Bradley at Greenwich. These consisted of two quadrants of 8-feet radius, a transit instrument of the same focal length, and a zenith sector of 12 feet.

With these instruments Hornsby and his successors, Robertson and Rigaud, maintained a systematic and regular series of observations for 65 years, from 1774 to 1838, interrupted only, owing to Hornsby's failing health, between the years 1803 and 1810, when he died. These observations were all regularly and methodically copied into large folio books, in a form exactly similar to Hornsby's and Robertson's printed edition of Bradley's obser-